

Process, service computer, switching centre, terminals and program modules for handling incoming telephone calls during an online data-network session blocking a subscriber line

Claims

1. A process for handling incoming telephone calls for a subscriber line (VA1) of a telecommunications network (PSTN) during an online data-network session blocking the subscriber line (VA1), involving the following steps:

- a terminal (TERA) sets up a connection (VA11, VA1, VPOP1) to an access device (POP) of an online data network (INT) via the subscriber line (VA1),
- the access device (POP) sends current access data to the terminal (TERA),  
**characterised by** the following further steps:
  - the terminal (TERA) signals the current access data to a service computer (SCP, GPTM) of the telecommunications network,
  - a switching centre (SW1) of the telecommunications network signals to the service computer (SCP, GPTM) the fact that an incoming call destined for the subscriber line (VA1) is waiting and
    - the service computer (SCP, GPTM) supplies at least one predetermined service for the purpose of processing the incoming call.

25 2. Process according to Claim 1, characterised in that by way of predetermined service the service computer (SCP, GPTM) sends a message to the terminal (TERA) in which attention is drawn to the incoming call.

30 3. Process according to Claim 1, characterised in that by way of predetermined service the service computer (SCP, GPTM) forwards the incoming call to an alternative destination (TELA2).

4. Process according to Claim 1, characterised in that by way of predetermined service the service computer (SCP, GPTM) forwards the incoming call to the terminal (TERA) via the online data network.

5. Process according to Claim 1, characterised in that by way of predetermined service the service computer (SCP, GPTM) instructs the switching centre (SW1) or the terminal (TERA) to break off or to interrupt the online data-network session blocking the subscriber line (VA1) and in that the switching centre (SW1) signals the incoming call on the subscriber line (VA1).

10 6. Process according to Claim 1, characterised in that by way of predetermined service the service computer (SCP, GPTM) sends a selection menu to the terminal (TERA), by means of which a selection of possible follow-up services for the purpose of processing the incoming call is offered, in that the terminal (TERA) ascertains a selection that has been made by an operator in the selection menu, in that the terminal (TERA) sends the selection to the service computer (SCP, GPTM) and in that the service computer (SCP, GPTM) supplies the follow-up service defined in the selection.

15 7. Process according to Claim 1, characterised in that the service computer (SCP, GPTM) sends an instruction to the switching centre (SW1) to signal to the service computer (SCP, GPTM) the fact that an incoming call destined for the subscriber line (VA1) is waiting if the terminal (TERA) has set up the connection (VA11, VA1, VPOP) blocking the subscriber line (VA1) to the access device (POP) of the online data network (INT) via the subscriber line (VA1).

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8. Process according to Claim 1, characterised in that  
the switching centre (SW1) signals to the service computer  
(SCP, GPTM) a clear-down of the connection (VA11, VA1,  
VPOP) blocking the subscriber line (VA1) of the terminal  
5 (TERA) to the access device (POP) of the online data  
network (INT) via the subscriber line (VA1).

9. Process according to Claim 1, characterised in that  
when a call comes in that is directed to a special call  
10 number which has been set up in the switching centre (SW1)  
the switching centre (SW1) signals to the service computer  
(SCP, GPTM) the fact that an incoming call destined for  
the subscriber line (VA1) is waiting.

15 10. A service computer (SCP, GPTM) for handling incoming  
telephone calls for a subscriber line (VA1) of a  
telecommunications network (PSTN) during an online data-  
network session of a terminal (TERA) blocking the  
subscriber line (VA1), **characterised in that** the service  
20 computer (SCP, GPTM) exhibits receiving means (TRSC,  
CPUSC, CPUGP, IGP) which are configured in such a way that  
the service computer (SCP, GPTM) can receive access data  
sent from the terminal (TERA) which the terminal (TERA)  
has received from an access device (POP) of an online data  
25 network (INT) in the course of the setting-up of a  
connection (VA11, VA1, VPOP1) to the online data network  
(INT) via the subscriber line (VA1), in that the service  
computer (SCP, GPTM) exhibits memory means (MEMSC, MEMGP)  
which are configured in such a way that the service  
30 computer (SCP, GPTM) can store the access data, in that  
the receiving means (TRSC, CPUSC, TRGP, CPUGP) are  
moreover configured in such a way that the service  
computer (SCP, GPTM) can receive a message from a  
switching centre (SW1) of the telecommunications network,  
35 in which the switching centre (SW1) signals an incoming  
call destined for the subscriber line (VA1) to the service

~~computer (SCP, GPTM), and in that the service computer (SCP, GPTM) exhibits service-supplying means (TRSC, MEMSC, CPUSC, TRGP, MEMGP, CPUGP) which are configured in such a way that the service computer (SCP, GPTM) can supply at least one predetermined service for the purpose of processing the incoming call with the aid of the access data.~~

*11. A switching centre (SW1) for handling incoming telephone calls for a subscriber line (VA1) of a telecommunications network (PSTN) during an online data-network session of a terminal (TERA) blocking the subscriber line (VA1), said switching centre (SW1) exhibiting receiving means (TRSW) which are configured in such a way that the switching centre (SW1) can receive and hold an incoming call destined for the subscriber line (VA1) while the subscriber line (VA1) is blocked by an online data-network session of the terminal (TERA), and said switching device (SW1) exhibiting recognition means (TRSW, CPUSW) which are configured in such a way that the switching centre (SW1) can recognise that the terminal (TERA) has set up a connection (VA11, VA1, VPOP) blocking the subscriber line (VA1), **characterised in that** the switching centre (SW1) exhibits sending means (TRSW, CPUSW) which are configured in such a way that the switching centre can send a message to a service computer (SCP, GPTM) if an incoming call destined for the subscriber line (VA1) is waiting while the subscriber line (VA1) is blocked by an online data-network session of the terminal (TERA).*

*12. A terminal (TERA) for handling incoming telephone calls for a subscriber line (VA1) of a telecommunications network (PSTN) during an online data-network session of the terminal (TERA) blocking the subscriber line (VA1), **characterised in that** the terminal (TERA) exhibits*

~~receiving means (TRTER) which are configured in such a way that the terminal (TERA) can receive current access data from an access device (POP) of an online data network (INT) which the access device (POP) sends to the terminal (TERA) in the course of the setting-up of a connection (VA11, VA1, VPOP) to the online data network (INT) via the subscriber line (VA1), and in that the terminal (TERA) exhibits sending means (TRTER) which are configured in such a way that the terminal (TERA) can send the current access data to a service computer (SCP, GPTM) of the telecommunications network, which with the aid of the access data can supply at least one predetermined service for the purpose of processing an incoming call.~~

~~13. A terminal (TERA) for handling incoming telephone calls for a subscriber line (VA1) of a telecommunications network (PSTN) during an online data-network session of the terminal (TERA) blocking the subscriber line (VA1), characterised in that the terminal (TERA) exhibits receiving means (TRTER) which are configured in such a way that the terminal (TERA) can receive instructions from a service computer (SCP, GPTM) which, with a view to supplying at least one predetermined service for the purpose of processing the incoming call, the service computer (SCP, GPTM) sends off to the terminal (TERA) with the aid of access data which the service computer (SCP, GPTM) has obtained from the terminal (TERA) after a connection (VA11, VA1, VPOP) from the terminal (TERA) to the online data network (INT) has been set up via the subscriber line (VA1), and in that the terminal (TERA) exhibits executing means (CPUTR, MEMTR) which are configured in such a way that the terminal (TERA) can execute the instructions.~~

~~14. An access-data-sending program module for a terminal (TERA) for handling incoming telephone calls for a~~

15. A program module for a terminal (TERA) for handling incoming telephone calls for a subscriber line (VA1) of a telecommunications network (PSTN) during an online data-network session of the terminal (TERA) blocking the subscriber line (VA1), said program module containing program code which can be executed by a processor (CPUTR) in the terminal (TERA), **characterised in that** the program module exhibits receiving means which are configured in such a way that the program module can receive from an access device (POP) of an online data network (INT) current access data which the access device (POP) sends to the terminal (TERA) in the course of the setting-up of a connection (VA11, VA1, VPOP) to the online data network (INT) via the subscriber line (VA1), and in that the program module exhibits sending means which are configured in such a way that the program module can send the current access data to a service computer (SCP, GPTM) of the telecommunications network, which with the aid of the access data can supply at least one predetermined service for the purpose of processing an incoming call.

20. 15. A program module for a terminal (TERA) for handling incoming telephone calls for a subscriber line (VA1) of a telecommunications network (PSTN) during an online data-network session of the terminal (TERA) blocking the subscriber line (VA1), said program module containing program code which can be executed by a processor (CPUTR) in the terminal (TERA), **characterised in that** the program module exhibits receiving means which are configured in such a way that the program module can receive instructions from a service computer (SCP, GPTM) which the service computer (SCP, GPTM) sends off to the terminal (TERA) with a view to supplying at least one predetermined service for the purpose of processing the incoming call with the aid of access data which the service computer (SCP, GPTM) has received from the terminal (TERA) after a connection (VA11, VA1, VPOP) from the terminal (TERA) to

~~the online data network (INT) has been set up via the subscriber line (VA1), and in that the program module exhibits executing means which are configured in such a way that the program module can execute the instructions.~~

16. A memory means with an access-data-sending program module according to Claim 14.

17. A memory means with a program module according to  
Claim 15.

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